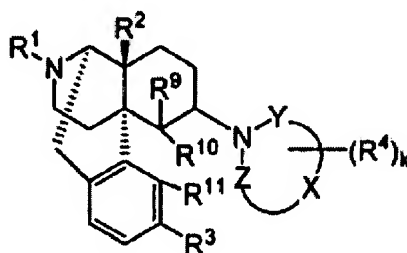


In the Claims

1. (Currently Amended) A method of treating urinary frequency, urinary urgency or urinary incontinence, comprising administering a therapeutically effective amount of a morphinan derivative having a nitrogen-containing heterocyclic group of the Formula (I):



(I)

wherein R¹ is hydrogen, C₁-C₅ alkyl, C₄-C₇ cycloalkylalkyl, C₆-C₈ cycloalkenylalkyl, C₆-C₁₂ aryl, C₇-C₁₃ aralkyl, C₃-C₇ alkenyl, furanylalkyl (wherein the number of carbon atoms in the alkyl moiety is 1 to 5), thienylalkyl (wherein the number of carbon atoms in the alkyl moiety is 1 to 5) or pyridylalkyl (wherein the number of carbon atoms in the alkyl moiety is 1 to 5), R² and R³ independently are hydrogen, hydroxy, C₁-C₅ alkoxy, C₃-C₇ alkenyloxy, C₇-C₁₃ aralkyloxy or C₁-C₅ alkanoyloxy; Y and Z independently represent valence bond or -C(=O)-; -X- represents a C₂-C₇ carbon chain (one or more of the carbon atoms therein may be replaced by nitrogen, oxygen or sulfur atom(s), and the carbon chain may contain an unsaturated bond) constituting a part of the ring structure; k is an integer of 0 to 8; R⁴ is(are) (a) substituent(s) in the number of k on the nitrogen-containing ring, which independently represent(s) fluorine, chlorine, bromine, iodine, nitro, hydroxy, C₁-C₅ alkyl, benzylidene, ethylidene, cyclohexylmethylidene, butylidene, phenethylidene, C₇-C₁₃ cycloalkylalkyl, C₆-C₁₂ aryl, C₇-C₁₃ aralkyl, C₇-C₁₃ aralkyloxy, C₁-C₅ alkoxy, trifluoromethyl, trifluoromethoxy, cyano, isothiocyanato, SR⁶, SOR⁶, SO₂R⁶, (CH₂)_pOR⁶, (CH₂)_pCOR⁶, (CH₂)_pCO₂R⁶, SO₂NR⁷R⁸, CONR⁷R⁸, (CH₂)_pNR⁷R⁸ or (CH₂)_pN(R⁷)COR⁸, or among the R⁴'s in the

number of k, two R⁴s bound to the same carbon atom or to the same sulfur atom cooperatively represent one oxygen atom to form carbonyl or sulfoxide (with the proviso that in cases where Y and Z is a valence bond, the formed carbonyl is not bound directly to the nitrogen atom which is bound to the morphinan structure), or two R⁴s bound to the same carbon atom cooperatively represent one sulfur atom to form thiocarbonyl, or four R⁴s bound to the same sulfur atom cooperatively represent two oxygen atoms to form sulfone, or among the R⁴s in the number of k, two R⁴s bound to adjacent carbon atoms, respectively, cooperatively form benzene fused ring, pyridine fused ring, naphthalene fused ring, cyclopropane fused ring, cyclobutane fused ring, cyclopentane fused ring, cyclopentene fused ring, cyclohexane fused ring, cyclohexene fused ring, cycloheptane fused ring or cycloheptene fused ring, each of said fused rings is non-substituted or substituted by 1 or more R⁵s, wherein R⁵(s) independently represent(s) fluorine, chlorine, bromine, iodine, nitro, hydroxy, C₁-C₅ alkyl, ~~C₇-C₁₃ aralkyl (in cases where Y and Z are simultaneously C(=O) or valence bonds)~~, C₁-C₅ alkoxy, trifluoromethyl, trifluoro-methoxy, cyano, C₆-C₁₂ aryl, isothiocyanato, SR⁶, SOR⁶, SO₂R⁶, (CH₂)_pOR⁶, (CH₂)_pCOR⁶, (CH₂)_pCO₂R⁶, SO₂NR⁷R⁸, CONR⁷R⁸, (CH₂)_pNR⁷R⁸ or (CH₂)_pN(R⁷)COR⁸; R⁹ is hydrogen, C₁-C₅ alkyl, C₁-C₅ alkenyl, C₇-C₁₃ aralkyl, C₁-C₃ hydroxyalkyl, (CH₂)_pOR⁶ or (CH₂)_pCO₂R⁶; R¹⁰ and R¹¹ are bound to form -O-, -S- or -CH₂-, or R¹⁰ is hydrogen and R¹¹ is hydrogen, hydroxy, C₁-C₅ alkoxy or C₁-C₅ alkanoyloxy; p is an integer of 0 to 5; R⁶ is hydrogen, C₁-C₅ alkyl, C₃-C₇ alkenyl, C₆-C₁₂ aryl or C₇-C₁₃ aralkyl; and R⁷ and R⁸ independently are hydrogen, C₁-C₅ alkyl or C₇-C₁₃ aralkyl; or a pharmaceutically acceptable acid addition salt thereof to a patient.

2. (Previously Presented) The method according to claim 1, wherein in said Formula (I), only one of Y and Z is -C(=O)- and the other is valence bond.

3. (Previously Presented) The method according to claim 1, wherein in said Formula (I), both Y and Z are -C(=O)-.

4. (Previously Presented) The method according to claim 3, wherein in said Formula (I), R^1 is hydrogen, C_4 - C_7 cycloalkylalkyl, C_6 - C_8 cycloalkenylalkyl, C_6 - C_{12} aryl or C_3 - C_7 alkenyl; k is an integer of 2 to 8; and two R^4 s bound to adjacent carbon atoms, respectively, cooperatively form benzene fused ring, pyridine fused ring, naphthalene fused ring, cyclopropane fused ring, cyclobutane fused ring, cyclopentane fused ring, cyclopentene fused ring, cyclohexane fused ring, cyclohexene fused ring, cycloheptane fused ring or cycloheptene fused ring, each of said fused rings is non-substituted or substituted by 1 or more R^5 s.

5. (Currently Amended) The method according to claim 3, wherein in said Formula (I), R^1 is hydrogen, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, allyl or prenyl; R^2 is hydrogen, hydroxy, methoxy, ethoxy, allyloxy, benzyloxy, acetoxy or propionoxy; R^3 is hydrogen, hydroxy, methoxy, ethoxy, benzyloxy, acetoxy or propionoxy; k is an integer of 2 to 6, two R^4 s cooperatively form benzene fused ring which is non-substituted or substituted by 1 to 4 R^5 s; R^5 (s) independently is(are) fluorine, chlorine, bromine, iodine, nitro, methyl, ethyl, propyl, benzyl, hydroxy, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano, phenyl, isothiocyanato, SR^6 , SOR^6 , SO_2R^6 , $(CH_2)_pOR^6$, $(CH_2)_pCOR^6$, $(CH_2)_pCO_2R^6$, $SO_2NR^7R^8$, $CONR^7R^8$, $(CH_2)_pNR^7R^8$ or $(CH_2)_pN(R^7)COR^8$; p is an integer of 0 to 5; R^6 is hydrogen, methyl, ethyl, propyl or phenyl; R^7 and R^8 independently are hydrogen, methyl, ethyl, propyl or benzyl; R^9 is hydrogen or methyl; R^{10} and R^{11} are bound to form -O-, or R^{10} is hydrogen and R^{11} is hydrogen, hydroxy or methoxy.

6. (Previously Presented) The method according to claim 1, wherein in said Formula (I), both Y and Z are valence bonds.

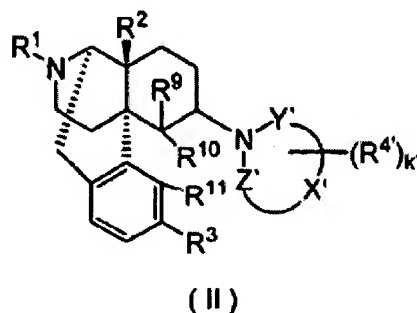
7. (Previously Presented) The method according to claim 6, wherein in said Formula (I), R^1 is hydrogen, C_1-C_5 alkyl, C_7-C_{13} aralkyl, furanylalkyl (wherein the number of carbon atoms in the alkyl moiety is 1 to 5), thienylalkyl (wherein the number of carbon atoms in the alkyl moiety is 1 to 5) or pyridylalkyl (wherein the number of carbon atoms in the alkyl moiety is 1 to 5); k is an integer of 2 to 8; two R^4 's bound to adjacent carbon atoms, respectively, cooperatively form benzene fused ring, pyridine fused ring, naphthalene fused ring, cyclopropane fused ring, cyclobutane fused ring, cyclopentane fused ring, cyclopentene fused ring, cyclohexane fused ring, cyclohexene fused ring, cycloheptane fused ring or cycloheptene fused ring, each of said fused rings is non-substituted or substituted by 1 or more R^5 's.

8. (Currently Amended) The method according to claim 6, wherein in said Formula (I), R^1 is hydrogen, methyl, ethyl, propyl, benzyl, phenethyl, phenylpropyl, 2-furanylmethyl, 2-furanylethyl, 2-furanylpropyl, 3-furanylmethyl, 3-furanylethyl, 3-furanylpropyl, 2-thienylmethyl, 2-thienylethyl, 2-thienylpropyl, 3-thienylmethyl, 3-thienylethyl, 3-thienylpropyl, 2-pyridynylmethyl, 2-pyridynylethyl, 2-pyridynylpropyl, 3-pyridynylmethyl, 3-pyridynylethyl, 3-pyridynylpropyl, 4-pyridynylmethyl, 4-pyridynylethyl, or 4-pyridynylpropyl; R^2 is hydrogen, hydroxy, methoxy, ethoxy, allyloxy, benzyloxy, acetoxy or propionoxy; R^3 is hydrogen, hydroxy, methoxy, ethoxy, benzyloxy, acetoxy or propionoxy; k is an integer of 2 to 6; two R^4 's cooperatively form benzene fused ring which is non-substituted or substituted by 1 to 4 R^5 's and other R^4 (s) independently is(are) methyl, ethyl, propyl or benzyl, or two R^4 's bound to the same carbon atom represent one oxygen atom to form carbonyl, R^5 (s) independently is(are) fluorine, chlorine, bromine, iodine, nitro, methyl, ethyl, propyl, benzyl, hydroxy, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano, phenyl, isothiocyanato, SR^6 , SOR^6 , SO_2R^6 , $(CH_2)_pOR^6$, $(CH_2)_pCOR^6$, $(CH_2)_pCO_2R^6$, $SO_2NR^7R^8$, $CONR^7R^8$, $(CH_2)_pNR^7R^8$ or $(CH_2)_pN(R^7)COR^8$; p is an integer of 0 to 5; R^6 is hydrogen, methyl,

ethyl, propyl or phenyl; R^7 and R^8 independently are hydrogen, methyl, ethyl, propyl or benzyl; R^9 is hydrogen or methyl; R^{10} and R^{11} are bound to form -O-, or R^{10} is hydrogen and R^{11} is hydrogen, hydroxy or methoxy.

9-10. (Cancelled)

11. (Currently Amended) A morphinan derivative of the Formula (II) having a nitrogen-containing heterocyclic group:



wherein $R^1, R^2, R^3, R^9, R^{10}$ and R^{11} are the same as in claim 1, R^4, X', Y', Z' and k' are the same as R^4, X, Y, Z and k in claim 1 with the proviso that ~~in cases where~~ Y' and Z' are not simultaneously valence bonds, ~~sulfone must be bound directly to the nitrogen atom which is bound to a morphinan structure,~~ in cases where Y' and Z' are simultaneously $-C(=O)-$ and X' is a carbon chain constituting a part of a ring structure, k' must be not less than 1, and in particular, in cases where $(R^4)_{k'}$ is a benzene fused ring, the benzene ring must be substituted by the R^5 ; or a pharmaceutically acceptable acid addition salt thereof.

12. (Original) The morphinan derivative or the pharmaceutically acceptable acid addition salt thereof according to claim 11, wherein in said Formula (II), only one of Y' and Z' is $-C(=O)-$ and the other is valence bond.

13. (Original) The morphinan derivative or the pharmaceutically acceptable acid addition salt thereof according to claim 11, wherein in said Formula (II), both Y' and Z' are -C(=O)-.

14. (Previously Presented) The morphinan derivative or the pharmaceutically acceptable acid addition salt thereof according to claim 13, wherein in said Formula (II), R¹ is hydrogen, C₄-C₇ cycloalkylalkyl, C₆-C₈ cycloalkenylalkyl, C₆-C₁₂ aryl or C₃-C₇ alkenyl; k' is an integer of 2 to 8 and two R⁴s bound to adjacent carbon atoms, respectively, cooperatively form benzene fused ring substituted by 1 or more R⁵s, or cooperatively form a pyridine fused ring, naphthalene fused ring, cyclopropane fused ring, cyclobutane fused ring, cyclopentane fused ring, cyclopentene fused ring, cyclohexane fused ring, cyclohexene fused ring, cycloheptane fused ring or cycloheptene fused ring, each of said fused rings is non-substituted or substituted by 1 or more R⁵s.

15. (Currently Amended) The morphinan derivative or the pharmaceutically acceptable acid addition salt thereof according to claim 13, wherein in said Formula (II), R¹ is hydrogen, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, allyl or prenyl; R² is hydrogen, hydroxy, methoxy, ethoxy, allyloxy, benzyloxy, acetoxy or propionoxy; R³ is hydrogen, hydroxy, methoxy, ethoxy, benzyloxy, acetoxy or propionoxy; k' is an integer of 2 to 6, two R⁴s cooperatively form benzene fused ring which is substituted by 1 to 4 R⁵s; R⁵(s) independently is(are) fluorine, chlorine, bromine, iodine, nitro, methyl, ethyl, propyl, benzyl, hydroxy, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano, phenyl, isothiocyanato, SR⁶, SOR⁶, SO₂R⁶, (CH₂)_pOR⁶, (CH₂)_pCOR⁶, (CH₂)_pCO₂R⁶, SO₂NR⁷R⁸, CONR⁷R⁸, (CH₂)_pNR⁷R⁸ or (CH₂)_pN(R⁷)COR⁸; p is an integer of 0 to 5; R⁶ is hydrogen, methyl, ethyl, propyl or phenyl; R⁷ and R⁸ independently are hydrogen, methyl, ethyl, propyl or benzyl; R⁹ is hydrogen or methyl; R¹⁰ and R¹¹ are bound to form -O-, or R¹⁰ is hydrogen and R¹¹ is hydrogen, hydroxy or methoxy.

16-19. (Cancelled)

20. (Previously Presented) A pharmaceutical composition comprising the morphinan derivative or the pharmaceutically acceptable acid addition salt thereof according to claim 11.

21-23. (Cancelled)